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EXAMINER

TSOY, ELENA

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,672

Applicant(s)

UERLINGS ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Amendment filed on December 3, 2003 has been entered. Claims 1-2 and 19-33 have been cancelled. New claims 34-51 have been added. Claims 34-51 are pending in the application.

Applicants state that claim 34 was introduced in Preliminary Amendment. However, as set forth in Office Action of 11/29/02 (Paper No. 7), the numbering of claims was not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. Since originally presented claims were 1-17, claims 19-34 added in the Preliminary Amendment were misnumbered. Misnumbered claims 19-34 had been renumbered as claims 18-33. Therefore, newly added claims 35-52 are also misnumbered. Misnumbered claims 35-52 have been renumbered as claims 34-51.

Double Patenting

Objection to claim 26 under 37 CFR 1.75 as being a substantial duplicate of claim 25 has been withdrawn due to cancellation of the claims.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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3. Claims 34-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Newly added limitation "...mark in the top coating of paper substrates that is not visible **within** the substrate..." (*emphasis added*) is not supported by specification. The paragraph bridging pages 10 and 11, which according to Applicants supports new claims 34-51, does not describe a laser mark not visible within the substrate except that the method allows to visualize the mark in the top coating whereas conventional "watermark" methods aim at visualizing the mark within the paper substrate itself. Moreover, Applicants' description of the invention in Remarks on page 6, that "the mark becomes visible *not* when the surface is treated with laser energy, but becomes visible in a top coating applied in separate step" relates actually to embodiment described at page 8 of the specification where the changes **at the surface** (not within the substrate) of the paper or the coating of the paper caused by laser of certain energy densities are not visible or discernible in transmission or reflection, but result in the generation or visualization of a mark only in the subsequent coating or coatings.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Rejection of claims 19, 23 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to cancellation of the claims

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6. Claims 34-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 34, lines 2, "...mark in the top coating of paper substrates that is not visible **within** the substrate..." (*emphasis added*) renders the claim indefinite because the paragraph bridging pages 10 and 11, which according to Applicants supports new claims 34-51, does not provide any description of the laser mark not visible within the substrate except that laser mark of claimed invention differs from conventional "watermark" visible within the paper substrate itself. And, as was discussed above, Applicants' explanation of the invention in Remarks on page 6, relates in fact to the changes **at the surface** (*not within*) the substrate of the paper or the coating of the paper. The interpretation of the phrase was based on what the Examiner could only glean from the paragraph bridging pages 10 and 11 as being just different from conventional "watermark", i.e. as laser markings made only in coating layers without any changes in paper substrate.

Claim 36, lines 1-2, the phrase "The method according to claim 35 (renumbered as claim 34), characterized in that the paper substrate is selected from the group consisting of a fibrous web, a surface-treated fibrous web, a coated fibrous web which is treated with laser energy **at its surface**" (*emphasis added*) renders the claim indefinite because it is not clear whether all members of the group are treated with laser energy at their surface or only the coated fibrous web. Since independent claim 34 recites that mark is generated in at least one layer on a paper substrate, i.e. only coated fibrous web is treated with laser, **not** the substrate itself (not to generate visible mark within the substrate), for examining purposes the phrase was interpreted as "The method according to claim 34, characterized in that the paper substrate is selected from the group consisting of a fibrous web, a surface-treated fibrous web and a coated fibrous web".

Claims 38-40, 44, the phrase "The method according to claim 37 (renumbered as claim 36), characterized in that the surface of the fibrous web is treated with laser energy, ..." (*emphasis added*) renders the claims indefinite since according to claims 34/36, **at least one layer** positioned below the top coating is treated with laser energy, **not** the substrate itself (not to generate visible mark within the substrate). Thus, claims 38-40 relating in fact to non-elected embodiment, which is described at page 6, lines 1-6, of the specification, contradict main concept of claim 34 reciting other embodiment described at page 6, lines 21-27 of the specification.

Claim 51, line 1, the suffix "able" (obtainable, preparable, derivable, etc.) when recited in conjunction with a process ("product obtainable by method...") renders the claim indefinite since it is not possible to determine with certainty when such a claim is infringed, i.e. exactly when a product is "able" to be made by the claimed method and when it is not.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 34-37, 41, 45, 46, 48, 49, 51** are rejected under 35 U.S.C. 102(b) as being anticipated by Berger et al (US 4,740,269).

Berger et al disclose a method for generating a mark comprising directing a laser beam onto paper printed with an ink or synthetic resin coating, preferably by a gravure process to quantitatively vaporize the printed layer to make an authenticating code mark (logotype, safety marking), optionally preserving the laser mark by coating with protective material such as lacquer,

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color or a hardenable plastic (synthetic resin) (See column 1, lines 56-68; column 2, lines 32-37), printing the optionally preserved laser marked paper, and then cutting to form banknotes, checks or the like (opaque top coating) (See column 3, lines 60-66). By removal of pigment a relief structure can also be obtained whose significant appearance can be identified by persons for example by shadow effect or optical variations at different observation angles (See column 2, lines 47-50).

As to claim 37, Berger et al further teach that it is also conceivable to use special energy absorbing material such as sizing material (surface treating material) and filler material in the paper bulk in order to augment the expansion effect and/or to assist preservation of the pattern (See column 2, lines 59-63). Or if it is not agreed that paper web treated with sizing material is claimed surface-treated fibrous web, limitations of Claim 37 may not be addressed since dependent claim 37 further limits a surface-treated fibrous web when said surface-treated fibrous web is chosen from the Markush Group of Claim 36, but Claim 37 does not require that said surface-treated fibrous web be chosen from the Markush Group.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claim 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (US 4,740,269) in view of Monaghan (US 5,706,106).

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Berger et al, as applied above, fail to teach that the paper treated with laser energy is coated with metal before printing.

Monaghan teaches that coating an embossed pattern on paper with a metal layer such as aluminium by means of vapor deposition before printing-on (See column 6, lines 1-6) allows creating a new unexpected visual effect (See column 1, lines 43-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coated laser images on a paper substrate in Berger et al by a metal layer such as aluminium before printing on with the expectation of providing the laser marked paper substrate with desired new unexpected visual effect, as taught by Monaghan.

12. **Claims 43, 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (US 4,740,269) in view of Monaghan (US 5,706,106), further in view of Takagi et al (US 4,091,138).

Berger et al in view of Monaghan fail to teach that the metal layer is copper (Claim 43) or gold (Claim 47).

Takagi et al teach that any metal capable of generating vapor such as aluminum, copper, gold, etc. (See column 3, lines 59-65) is suitable for depositing on various substrates including paper (See column 8, lines 13-15) by means of vapor deposition for making decoration materials (See column 4, lines 41-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used copper or gold instead of aluminum for depositing on a paper substrate in Berger et al in view of Monaghan with the expectation of providing the desired visual effect, since Takagi et al teach that any metal capable of generating vapor such as aluminum, copper,

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gold, etc. is suitable for depositing on various substrates including paper by means of vapor deposition for making decoration materials.

13. **Claim 50** is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al (US 4,740,269) in view of Sundberg (US 5,989,389).

Berger et al, as applied above, fails to teach that the paper for making banknotes or checks has a basis weight of 40-400 g/m².

Sundberg teaches that a paper cotton stock having a basis weight of approximately 80 g/m² may be used for making banknotes (See column 8, lines 53-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a paper a paper cotton stock having a basis weight of approximately 80 g/m² for making banknotes in a method of Berger et al since Sunberg teaches that a paper cotton stock having a basis weight of approximately 80 g/m² may be used for making banknotes.

Response to Arguments

14. Applicant's arguments with respect to claims 34-51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

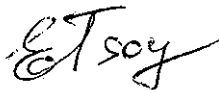
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30, Mo-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Elena Tsoy
Examiner
Art Unit 1762

January 16, 2004